

**Calendar No. 736**

107TH CONGRESS }  
2d Session }

SENATE

{ REPORT  
107-319 }

**ENTERPRISE INTEGRATION ACT**

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**R E P O R T**

OF THE

**COMMITTEE ON COMMERCE, SCIENCE, AND  
TRANSPORTATION**

ON

**H.R. 2733**



OCTOBER 16, 2002.—Ordered to be printed

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED SEVENTH CONGRESS

SECOND SESSION

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### ENTERPRISE INTEGRATION ACT

OCTOBER 16, 2002.—Ordered to be printed

Mr. HOLLINGS, from the Committee on Commerce, Science, and  
Transportation, submitted the following

### REPORT

[To accompany H.R. 2733]

The Committee on Commerce, Science, and Transportation, to which was referred the Act (H.R. 2733) to authorize the National Institute of Standards and Technology to work with major manufacturing industries on an initiative of standards development and implementation for electronic enterprise integration, having considered the same, reports favorably thereon without amendment and recommends that the Act do pass.

#### PURPOSE OF THE BILL

The purpose of the Act, the Enterprise Integration Act of 2001, is to establish an Enterprise Integration Initiative at the National Institute of Standards and Technology (NIST). This initiative would help companies better coordinate information exchange throughout the supply chain.

#### BACKGROUND, NEEDS, AND SUMMARY OF MAJOR PROVISIONS

Manufacturers in today's marketplace must be more flexible, efficient, and responsive to changes in customer preference. Around the world manufacturers are shifting from the old production model, in which a given product changed slowly and represented the aggregate preferences of consumers, to a new model in which manufacturers can more easily produce customized products to satisfy more specialized and changing consumer demands.

Developing a seamless exchange of information without data loss or corruption up and down the supply chain would enable manufacturers to improve their efficiency and meet these new demands. Unfortunately today's software and information technology systems

frequently lack interoperability—incompatible applications prevent manufacturers and suppliers from easily sharing data and information about design specifications, component modifications, etc.

Seamless electronic integration along the vertical supply chain is known as “enterprise integration”. A February 2001 report by the National Coalition for Advanced Manufacturing identified ways that the Federal government, in addition to manufacturing industries and software companies, could help promote enterprise integration. H.R. 2733 would address several of these recommendations.

The Act would establish an Enterprise Integration Initiative at the NIST. The initiative would help companies better coordinate information exchange throughout the supply chain, so that information can flow to all companies along the supply chain without data loss or corruption. For example, if Ford Motor Company changes a design specification for a bumper, every one of the suppliers that contribute to that part would be able to quickly and easily see how the new specification affects their component. This kind of integration would help businesses, large and small, reduce costs and design cycle times, and increase efficiency when changing a product.

Under the Act, NIST would work with industry to develop road maps that outline the steps a given industry must take to become more electronically integrated. NIST would help industry develop voluntary consensus standards and agreements on protocols for information exchange and provide assistance to conduct pilot projects to support the initiative.

The Act would authorize \$2 million for fiscal year (FY) 2002, \$10 million for FY 2003, \$15 million for FY 2004, and \$20 million for FY 2005 for these activities.

#### LEGISLATIVE HISTORY

The Act passed the House of Representatives by a vote of 397-22 on July 11, 2002, and it was referred to the Senate Committee on Commerce, Science, and Technology. The Committee held a hearing on the Department of Commerce’s Technology Administration, including NIST, on April 16, 2002.

The Committee met in Executive Session on September 19, 2002, and ordered the Act reported, without amendment.

#### ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. CONGRESS,  
CONGRESSIONAL BUDGET OFFICE,  
*Washington, DC, September 25, 2002.*

Hon. ERNEST F. HOLLINGS,  
*Chairman, Committee on Commerce, Science, and Transportation,  
U.S. Senate, Washington, DC.*

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 2733, the Enterprise Integration Act of 2002.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Ken Johnson.

Sincerely,

BARRY B. ANDERSON  
(For Dan L. Crippen, Director).

Enclosure.

*H.R. 2733—Enterprise Integration Act of 2002*

Summary: H.R. 2733 would require the National Institute of Standards and Technology (NIST) to perform research, provide technical assistance, and develop standards related to enterprise integration. Enterprise integration is the effort to facilitate the exchange of data among manufacturing companies within supply chains. The act would authorize the appropriation of \$45 million over three years to carry out these activities.

Assuming the appropriation of the specified amounts, CBO estimates that implementing H.R. 2733 would cost about \$45 million during the 2003–2007 period. The act would not affect direct spending or receipts; therefore, pay-as-you-go procedures would not apply.

H.R. 2733 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would not affect the budgets of state, local, or tribal governments.

Estimated cost to the Federal Government: The estimated budgetary impact of H.R. 2733 is shown in the following table. The costs of this legislation fall within budget function 370 (commerce and housing credit).

	By fiscal year, in million of dollars—				
	2003	2004	2005	2006	2007
CHANGES IN SPENDING SUBJECT TO APPROPRIATION					
Authorization Level .....	10	15	20	0	0
Estimated Outlays .....	8	14	19	4	0

Basis of estimate: H.R. 2733 would authorize the appropriation of \$45 million over three years for NIST to undertake a variety of activities to promote enterprise integration. For this estimate, CBO assumes that the act will be enacted this fall, and that funds will be appropriated around the beginning of each fiscal year. Based on the historical spending patterns of similar NIST programs, CBO estimates that implementing H.R. 2733 would cost about \$8 million in 2003 and \$45 million over the 2003–2006 period, assuming the appropriation of the specified amounts.

Pay-as-you-go considerations: None.

Intergovernmental and private-sector impact: H.R. 2733 contains no intergovernmental or private-sector mandates as defined in UMRA and would not affect the budgets of state, local, or tribal governments.

Previous CBO estimate: On June 3, 2002, CBO transmitted a cost estimate for H.R. 2733, as ordered reported by the House Committee on Science on May 22, 2002. The two versions of the legislation are nearly identical, and the estimated costs are similar. However, in the previous estimate, CBO assumed that an appropriation

of \$2 million would be enacted to implement the new program in 2002, and estimated that those funds would be spent in 2003.

Estimate prepared by: Federal Costs: Ken Johnson; Impact on State, Local, and Tribal Governments: Angela Seitz; and Impact on the Private Sector: Paige Piper/Bach.

Estimate approved by: Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

#### REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

##### NUMBER OF PERSONS COVERED

The Committee believes that the Act would not subject any individuals or businesses affected by the legislation to any additional regulations.

##### ECONOMIC IMPACT

The Act would not have an adverse economic impact on the Nation. It would authorize funding for the establishment of an enterprise integration initiative to increase industry efficiency and lower manufacturing costs.

##### PRIVACY

The Act would not have a negative impact on the personal privacy of individuals.

##### PAPERWORK

The Act would not increase paperwork requirements for private individuals or businesses. The Act would require the Director of NIST to submit a report on the activities of the enterprise integration initiative that would be established under H.R. 2733.

#### SECTION-BY-SECTION ANALYSIS

##### *Section 1. Short title*

Section 1 would cite the short title of the reported Act as the "Enterprise Integration Act of 2001."

##### *Section 2. Findings*

Section 2 would make several findings in support of the enterprise integration initiative. Among the findings is a declaration that it is in the national interest that NIST accelerate its ongoing efforts to help industry develop standards and enterprise integration processes to increase efficiency and lower costs.

##### *Section 3. Enterprise integration initiative*

Subsection (a) would require the Director of NIST to establish an enterprise integration initiative within the United States to develop and implement standards and protocols to enable major manufacturing industries and businesses, including small businesses, to electronically exchange product- and standards-related information. The initiative would involve the NIST laboratories, the Manufac-

turing Extension Program (MEP), and the Malcolm Baldrige National Quality Program, where appropriate. The initiative, involving consortia of Government and industry, would build upon ongoing efforts of NIST and the private sector.

Under subsection (b), the Director would be permitted to work with industry representatives, trade associations, professional societies, and others as appropriate to identify all enterprise standardization and implementation activities underway affecting that industry. The Director also would be authorized to assess the current state of enterprise integration within major manufacturing industries and to assist industry representatives and organizations in the development of roadmaps, based on voluntary consensus standards, that permit supply chains to operate as an integrated electronic enterprise.

Subsection (c) would require the Director of NIST to submit to the House of Representatives Committee on Science and the Senate Committee on Commerce, Science, and Transportation within 180 days after the enactment of this legislation, and annually thereafter, a report on the activities of the initiative.

Subsection (d) would authorize the Director of NIST to work with industry, trade associations, professional societies, and others as appropriate, to carry out the following activities in support of the legislation:

- Raise awareness of enterprise integration activities, including convening conferences and conducting outreach to businesses that are owned by women or minorities.
- Develop enterprise integration roadmaps.
- Support the development, testing, promulgation, integration, adoption and upgrading of standards relating to enterprise integration, including application protocols.
- Provide technical assistance and, if necessary, financial support to small and medium-sized businesses that set up pilot projects in enterprise integration.

Subsection (e) would require the Director of NIST to ensure that the MEP is prepared to advise small to medium-sized businesses on how to acquire the expertise, equipment, and training necessary to participate fully in supply chains using enterprise integration.

#### *Section 4. Definitions*

Section 4 would define the terms “automotive”, “Director”, “enterprise integration”, “major manufacturing industry”, and “road map”.

#### *Section 5. Authorization of appropriations*

Section 5 would authorize appropriations of \$2 million for FY 2002, \$10 million for FY 2003, \$15 million for FY 2004, and \$20 million for FY 2005 for NIST’s Enterprise Integration Initiative.

### CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the Committee states that the Act as reported would make no change to existing law.